

Appl. No. : 09/584,656
Filed : May 30, 2000

REMARKS

Claims 53-76 are pending. Claims 56-58, 60-64, 66 and 67 are considered withdrawn until a generic claim is allowed, in view of a previous election of the species represented by the embodiment of Figures 1A-1C. The Examiner has identified Claim 65 as generic to all three disclosed embodiments.

As described in more detail below, Applicant respectfully submits that at least Claims 53 and 65 are generic to at least the embodiments of Figures 1A and 2A, and accordingly requests reinstatement of withdrawn Claims 56-58 and 67.

Rejections Under 35 U.S.C. §112

The Examiner has rejected Claims 70 and 75 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

In particular, the Examiner states that it is unclear what structure is being "configured" in Claim 70. In response, Applicant has amended Claim 70 to more particularly recite that the support structure and the thermal exchange member are configured to position the substrate within the process chamber in the cooling position.

The Examiner has also found that it is unclear how the "wall defining the chamber" in Claim 75 is "positioned within the chamber" as recited in Claim 74. In response, Applicant has amended Claim 75 to depend from Claim 72.

Accordingly, Applicant submits that the rejections for indefiniteness are overcome.

Rejections for Double Patenting

The Examiner has rejected various claims under the judicially created doctrine of obviousness-type double patenting as being unpatentable over various claims of U.S. Patent No. 6,209,220, alone or in view of Ngan et al. In response, Applicant submits herewith a Terminal Disclaimer.

Accordingly, Applicant submits that the rejections for double patenting are overcome.

Rejections Under 35 U.S.C. §102

The Examiner has rejected Claims 53-54, 59, 65, 68-71 under 35 U.S.C. §102(b) as being clearly anticipated by U.S. Patent No. 5,181,556 (Hughes). The Examiner has also rejected Claims 53-55, 59, 65, 68-76 under 35 U.S.C. §102(e) as being clearly anticipated by U.S. Patent No. 6,000,227 (Krocker).

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Each of the rejected claims recites a thermal exchange mechanism and moving parts to define two positions, wherein substrate treatment or processing take place at one of the positions and thermal exchange takes place at the other. For example, independent Claim 53 recites two positions, a first position allowing "treatment of the substrate upon the support" and a second position allowing conductive heat transport across a gap. Independent Claim 65 recites a support structure configured "to support a substrate in a process chamber during high temperature processing" and also recites a cooling position in the substrate is supported upon the support structure. Independent Claim 72 recites a first position "allowing treatment of the substrate upon the support structure within the chamber" while the second position allows thermal exchange with a closely spaced substrate.

The asserted prior art, in contrast, teaches nothing about substrate treatment or processing. Rather, the references both taught cooling stations that are separate from the process chamber. Hughes taught a "substrate cooling station 1 is operatively secured to the main vacuum chamber housing 21" (Col. 3, lines 46-49) such that the disclosed substrate support and cooling mechanism were separate from the process chamber; contrary to Applicant's claims, no substrate treatment were taught within the cooling station 1. Similarly, Kroeker taught cooling systems 118 in the lid of a transfer chamber 102 (Col. 2, lines 32-35). Rather than teaching that processing or treatment of substrates occurs within the cooling systems 118 or within the transfer chamber 102, Kroeker explicitly taught that all such treatment would occur within separate, adjacent process chambers 104. See Col. 4, line 15 to Col. 5, line 9.

Accordingly, Applicant submits that the art of record did not teach or suggest each of the recited features in the pending claims, and that the claims are accordingly allowable over the art of record.

Request for Reinstatement of Claims Directed to Second Embodiment

The Examiner required election among the three disclosed embodiments (represented by Figures 1A, 2A and 4A. Applicant elected the species represented by Figure 1A and identified the claims reading on this embodiment.

In view of the foregoing discussion of the rejections under §102, Applicant submits that at least Claims 53 and 65 are allowable and that both of these claims are generic to the embodiments of Figures 1A and 2A. Accordingly, Applicant respectfully requests reinstatement

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of withdrawn Claims 56-58 and 67, which Applicant submits also read upon the embodiment represented by Figure 2A.

CONCLUSIONS

In view of the foregoing amendments and remarks, Applicant respectfully submits that the application is in condition for allowance and respectfully requests the same. If, however, some issue remains that the Examiner feels can be addressed by Examiner's Amendment, the Examiner is cordially invited to call the undersigned for authorization.

Attached hereto is a separate paper entitled VERSION OF THE AMENDMENTS SHOWING CHANGES MADE, in which additions are shown in double underlining and deletions are shown ~~stricken through~~.

Respectfully submitted,

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VERSION SHOWING CHANGES MADE TO THE CLAIMS

Claims 60-64 and 66 have been deleted.

Claims 70 and 75 have been amended as indicated below.

70. (Amended) The cooling mechanism of Claim 65, wherein the support structure and the thermal exchange member are configured to position the substrate within the process chamber in the cooling position.

75. (Amended) The processing reactor of Claim 74 72, wherein the thermal exchange member is one of the plurality of walls defining the chamber.

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